

REMARKS

The Final Office Action dated May 18, 2005 rejects independent claims 1 and 8, and dependent claims 3 to 7 and 10 to 12 under 35 U.S.C. §103(a), as being unpatentable over U.S. Patent No. 5,253,299 to Ishida (hereinafter "Ishida") in view of U.S. Patent No. 5,315,660 to Anderson et al. (hereinafter "Anderson") and U.S. Patent No. 6,009,129 to Kenney et al. (hereinafter "Kenney"). Further, the Office Action rejects dependent claims 2 and 9, as being unpatentable over Ishida as modified by Anderson and Kenney as applied to claims 1 and 8 above, and further in view of U.S. Patent No. 5,388,159 to Sakata (hereinafter "Sakata").

Applicant has respectfully amended independent claims 1 and 8 and dependent claims 2 and 9 in order to clarify the difference between the cited documents and the present invention and to overcome the above-mentioned rejections. In addition, claims 13 and 14 are added in order to better describe the present invention. Accordingly, claims 1 to 14 are now pending for consideration. Favorable reconsideration of the present application is respectfully requested.

Rejection under 35 U.S.C. §103:

The Office Action rejects independent claims 1 and 8, and dependent claims 3 to 7 and 10 to 12 under 35 U. S. C. §103 (a) , as being unpatentable over Ishida in view of Anderson and Kenney.

Applicant respectfully traverses the rejection of claims 1, 3-8, and 10-12, under 35 U.S.C. § 103(a) as being unpatentable over Ishida in view of Anderson and Kenney for at least the reason that none of the references, either individually or in combination, teaches or suggests every claim element. Applicant has respectfully amended

independent claims 1 and 8 and dependent claims 2 and 9. Support can be found in, for example, page 12; lines 8 to 9, page 12 lines 19 to 21, and page 13; lines 15 to 17 of the specification and FIG. 2 as originally filed.

In the present invention claimed in the currently amended claim 1, the high pass filter extracts the high frequency component from the input signal, the detecting device detects the noise level of the noise from the input signal by use of the high frequency component extracted by the high pass filter, and the gain controlling device generates the first control signal and the second control signal on the basis of the detected noise level. The first control signal is used for adjusting a level of the input signal so as to make the detected noise level equal to a predetermined threshold level, and the second control signal is used for adjusting a level of a reduced adjusted signal so as to restore the level of the reduced adjusted signal to an original level of the input signal. The adjusting device adjusts the level of the input signal that does not pass the high pass filter on the basis of the first control signal. That is, the adjusting device adjusts the level of the input signal that does not pass the high pass filter on the basis of the first control signal. In other words, noise levels in all frequency bands of the input signal are reduced by use of the high frequency component extracted by the high pass filter. Since the property of the high frequency component of the sound existing part of the music signal is very similar to the property of a pulse signal, and therefore, if the component having the lowest level is extracted from the high frequency component of the input signal, this lowest level component may be considered as the noise component. See Specification page 12 line 21 to page 13 line 1.

On the contrary, Ishida discloses that the stereo differential signal (L-R) is divided into a plurality (n) of frequency bands, and noise elimination processing is performed in each of the divisional frequency bands by extracting the divisional stereo differential signal (L-R)_d in accordance with the signal level of each divisional frequency band. See column 2 line 63 to column 3 line 1. That is, in Ishida, the noise is eliminated in the divisional frequency bands by use of a plurality of the signal levels, which correspond to the divisional frequency bands respectively. In other words, Ishida does not disclose that noise levels in all frequency bands are reduced by use of the frequency component in one divisional frequency band extracted by one band pass filter. Namely, Ishida does not disclose the adjusting device in the currently amended claim 1.

Kenney discloses that the low noise amplifier (LNA) 305 sets the broadband-filtered signal to high gain (see column 6 lines 42 to 48). Kenney also discloses that the first intermediate frequency (IF) signal, which has been filtered by the bandpass filter 308, is amplified by the variable gain amplifier (VGA) 309 according to the control signal provided by the automatic gain controller (AGC) 315 (see column 6 lines 55 to 59), and that the AGC block 315 receives a control signal from the digital signal processor (DSP) 330 (column 7 line 53) and sets the gain of VGA 309 to a level appropriate for the received signal (column 7 lines 64 to 65). That is, although Kenney discloses that the AGC block 315 sets the gain of VGA 309 to the appropriate level in accordance with the control signal which the DSP 330 generates according to I (in-phase) and Q (quadrature) signals in the received signal (RX), Kenney does not disclose that the low noise amplifier (LNA) 305 sets signals which have not been filtered by any band pass

filters to high gain according to a certain control signal. In other words, Kenney does not disclose the adjusting device in the currently amended claim 1.

Anderson does not disclose that the noise level in all frequency bands are reduced by use of the high frequency component of the input signal extracted by the high pass filter as claimed in the currently amended claim 1, nor that signals inputted to the fixed deemphasis unit 910 are controlled according to a certain control signal corresponding to the first control signal in the currently amended claim 1. That is, Anderson does not disclose the adjusting device in the currently amended claim 1.

As mentioned above, none of Ishida, Kenney, and Anderson discloses, teaches, or suggests at least that the noise level in all frequency bands are reduced by use of the high frequency component extracted by one band pass filter as claimed in the currently amended claim 1. Even if Ishida, Kenney, and Anderson are combined, a person skilled in the art could not achieve the technical features of the currently amended claim 1. Therefore, claim 1 is patentable for at least the reasons discussed above.

Claim 8 although different in scope, includes recitations similar to the above-mentioned recitations of claim 1, and is therefore allowable, for at least the reasons set forth above.

Dependent claims 3 to 7 and 10 to 14 ultimately depend on one of claims 1 and 8, and therefore, are allowable for at least the reasons discussed above and in view of their additional recitations of novelty.

Applicant respectfully traverses the rejection of claims 2 and 9 as being unpatentable over Ishida as modified by Anderson and Kenney as applied to claims 1 and 8 above, and further in view of Sakata. Dependent claims 2 and 9 depend from

and add additional features to claims 1 and 8 respectively. Furthermore, Sakata, relied on for its alleged disclosure of an extracting device, a rectifying device, an envelope signal generating device, and a level analyzing device, fails to cure the deficiency of Ishida, Anderson, and Kenney. Accordingly, claims 2 and 9 are allowable for at least the reasons set forth above.

The present application is now believed to be in condition for allowance. Favorable reconsideration and prompt allowance of claims 1 to 14 are earnestly solicited.

Please grant any extensions of time required to enter this response and charge any additional required fees to our deposit account 06-0916.

Respectfully submitted,

FINNEGAN, HENDERSON, FARABOW,
GARRETT & DUNNER, L.L.P.

Dated: January 6, 2006

By: _____



David W. Hill
Reg. No. 28,220